

REMARKS

Claims 49-52, 55, 71-73, 76, 80, 84, 166-172, 176-181, 217, and 218 are pending in the present application. In this response, claims 49-52, 55, 71-73, 76, 80, 84, 166-172, 176-181 have been amended, claims 63, 66, 68, and 173 have been cancelled, and new dependent claims 217 and 218 have been added.

Exemplary support for the claim amendments can be found throughout the specification and claims as filed. See, for example, pages 61-65 and Tables 13-15 including the description related thereto in the present specification.

Applicants respectfully request the Examiner to reconsider and withdraw the outstanding rejections in view of the foregoing amendments and the following remarks.

Rejections under 35 U.S.C. § 103

(i) Claims 49-52, 55, 63, 66, 68, 71-73, 76, 80, 84, 166-173, and 176-179 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 4,624,923 (hereinafter "Margel") in view of U.S. Patent No. 4,929,400 (hereinafter "Rembaum") and further in view of WO 91/06036 (hereinafter "Patel"). This rejection is respectfully traversed in light of the foregoing claim amendments.

Initially, it should be noted that the Office has the initial burden of establishing a factual basis to support the legal conclusion of obviousness. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). For rejections under 35 U.S.C. § 103(a) based upon a combination of prior art elements, in KSR Int'l v. Teleflex Inc., 127 S.Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007), the Supreme Court stated that "a patent composed of several elements is not proved obvious

merely by demonstrating that each of its elements was, independently, known in the prior art." "Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." In re Kahn, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006).

It should be noted that amended independent claim 49 recites a population of scattered light-detectable gold particles, wherein the coefficient of variation in size within said population is less than 5%, said gold particles comprising a surface coat of gold, wherein said gold particles have a diameter of from about 10 nm to about 140 nm and have maximum absorption wavelengths of from about 525 nm to about 635 nm, and wherein said gold particles comprise at least one additional material on their surfaces.

Margel is directed to a metal-coated polyaldehyde microsphere comprising a preformed polyaldehyde microsphere coated with a transition metal in elemental form. (See claim 1 of Margel). Margel fails to disclose or suggest scattered light-detectable gold particles. The Examiner concedes that Margel does not explicitly teach a coefficient of variation in size of less than 5%. (Office Action, Page 3). The Examiner further concedes that Margel does not teach that the coating is about 0.5, 0.8, 1, 1.5, 2, 3, 4, 5, 6, 9, 10, 12, 19, 20, 39, 49 or 74 nm thick. (Office Action, Page 3).

The Examiner has cited Rembaum and Patel to teach the deficiencies of Margel.

Rembaum is directed to a method of forming uniformly sized, small, spherical, polymeric particles having a diameter below 1000 Angstroms. (See claim 1 and Col.

8, lines 41-44 of Rembaum). Rembaum's polymeric particles can contain gold as filler particles. (Col. 7, lines 26-30 and Col. 8, lines 41-48).

Patel has been cited by the Examiner as disclosing silver or gold coatings having a thickness of 1.5 nm and 5 nm. (Page 7, lines 1-15; FIG. 22; Page 5, lines 25-32; and Pages 15-20). However, Patel's particles have a dielectric core made from silica. (Abstract and Page 6, line 24). Patel does not disclose or suggest scattered light-detectable gold particles, as presently recited in amended independent claim 49.

Accordingly, as discussed hereinabove, Margel and Patel at least fail to disclose or suggest the presently recited scattered light-detectable gold particles. With regard to Rembaum, Applicants respectfully submit that while Rembaum discloses polymeric particles that can include gold as filler particles (see, col. 7, line 27), Rembaum does not disclose or suggest the presently recited scattered light-detectable gold particles.

In view of at least the foregoing, Applicants respectfully submit that Margel, Rembaum, and Patel, either alone or in any combination, fail to disclose or suggest all the features recited in amended independent claim 49. Accordingly, Applicants respectfully submit that Margel, Rembaum, and Patel, either alone or in any combination, do not establish a prima facie case of obviousness of amended independent claim 49. As claims 50-52, 55, 71-73, 76, 80, 84, 166-172, 176-181, and 217 depend either directly or indirectly from independent claim 49, Margel, Rembaum, and Patel, either alone or in any combination, do not establish a prima facie case of obviousness of 50-52, 55, 71-73, 76, 80, 84, 166-172, 176-181, and 217, for at least the same reasons.

Even if were assumed *arguendo* that a *prima facie* case of obviousness has been established, Applicants respectfully submit that the following secondary considerations overcome any such *prima facie* case of obviousness.

Applicants respectfully submit that even if it is assumed *arguendo* that a *prima facie* case of obviousness has been established, such case can be rebutted by showing that the cited art, in any material respect, teaches away from the claimed invention. In re Geisler, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997). In this regard, Applicants respectfully submit that Margel, Rembaum, and Patel, each of which disclose non-metallic particles, teach away from the present claims that recite scattered light-detectable gold particles. This is because the specification provides that at visible wavelengths of incident light, the light scattering power of gold particles is much greater than for comparable non-metal-like particles. (See, for example, page 61 of the present specification). Accordingly, Applicants respectfully submit that the present claims are patentable over Margel, Rembaum, and Patel as these references teach away from the claimed invention.

Further, Applicants respectfully submit that the Examiner must consider that if the diameter range relied upon in setting forth the obviousness rejection is so broad (*e.g.*, below 1000 Angstroms as disclosed by Rembaum) as to encompass a very large number of possible distinct compositions, this might present a situation analogous to the obviousness of a species when the prior art broadly discloses a genus. In re Harris, 409 F.3d 1339, 74 USPQ2d 1951 (Fed. Cir. 2005). See also In re Baird, 16 F.3d 380, 29 USPQ2d 1550 (Fed. Cir. 1994); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992); M.P.E.P. § 2144.08. With regard to the foregoing reference to obviousness of a species when the prior art broadly discloses a genus,

it should be noted that according to M.P.E.P. § 2144.08, the patentability of a claim to a specific compound or subgenus embraced by a prior art genus should be analyzed no differently than any other claim for purposes of 35 U.S.C. 103.

Therefore, in view of the foregoing standard, if it is assumed *arguendo* that a *prima facie* case of obviousness has been established, the Examiner's attention is directed to M.P.E.P. § 2144.05, which provides that Applicants can rebut a *prima facie* case of obviousness based on overlapping ranges by showing unexpected advantages of the claimed range relative to the prior art range. In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990).

As discussed hereinabove, Rembaum has been cited as disclosing particles having a diameter range of less than 1000 Angstroms. (Office Action, Page 3). Applicants respectfully submit that Rembaum's diameter range is very broad. Applicants further respectfully submit that Rembaum, either alone or in any combination with Margel and Patel, does not show any unexpected advantages of a diameter range of from about 10 nm to about 140 nm. In fact, Rembaum's examples merely mention production of droplets having a size range of from 1000 Angstroms to 100 microns, which again is a very broad range of particle sizes.

In contrast, Applicants respectfully submit that the presently recited scattered light-detectable gold particles having a diameter of from about 10 nm to about 140 nm have unexpectedly desirable light scattering power compared to other materials. (See, for example, Pages 61-65 and Tables 13-15 including the description related thereto in the present specification). Further, Applicants respectfully submit that scattered light-detectable gold particles having diameters that fall within the presently recited diameter range have unexpectedly high scattered light intensities. (See, for

example, Table 15 including the description related thereto in the present specification).

Applicants respectfully submit that, as discussed hereinabove, not only do Rembaum, Margel, and Patel fail to disclose or suggest the presently recited scattered light-detectable gold particles, Rembaum, Margel, and Patel also fail to appreciate the unexpected advantages of the presently recited scattered light-detectable gold particles having a diameter range of from about 10 nm to about 140 nm.

As such, Applicants respectfully submit that Margel, Rembaum, and Patel, either alone or in any combination, fail to disclose or suggest all the features recited in the present claims and therefore fail to establish a prima facie case of obviousness of the present claims. Applicants further respectfully submit that even it were assumed arguendo that Margel, Rembaum, and Patel establish a prima facie case of obviousness of the present claims, such case has been successfully rebutted in view of the foregoing secondary considerations.

In view of at least the foregoing, Applicants respectfully submit that the obviousness rejection over Margel, Rembaum, and Patel should be withdrawn.

(ii) Claims 180 and 181 have been rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Margel in view of Rembaum and further in view of U.S. Patent No. 5,567,628 (hereinafter "Tarcha").

Initially, it should be noted that claims 180 and 181 depend from independent claim 49. The Examiner has cited Margel, Rembaum, and Patel to reject independent claim 49. (See Page 3 of Office Action). However, the Examiner has

not relied upon Patel when rejecting claims 180 and 181. Applicants respectfully submit that the rejection of claims 180 and 181, therefore, appears to be improper because claims 180 and 181 certainly include the features of independent claim 49 from which they depend. In this regard, the Examiner is requested to clarify the record and explain which references have been relied upon to reject dependent claims 180 and 181.

Nonetheless, in an effort to advance prosecution, Applicants traverse the rejection of claims 180 and 181. The discussion hereinabove regarding Margel, Rembaum, and Patel is herein incorporated in its entirety. Moreover, Applicants respectfully submit that Tarcha fails to cure the above-noted deficiencies of Margel, Rembaum, and Patel. In view of at least the foregoing, Applicants respectfully submit that the cited references fail to disclose or suggest the features recited in amended independent claim 49. Accordingly, Applicants respectfully submit that the rejection of the claims dependent from claim 49 should be withdrawn for at least the same reasons.

In view of at least the foregoing, Applicants respectfully submit that the obviousness rejection over Margel, Rembaum, and Tarcha should be withdrawn.

Conclusion

Applicants invite the Examiner to contact Applicants' representative at the telephone number listed below if any issues remain in this matter, or if a discussion regarding any portion of the application is desired by the Examiner.

In the event that this paper is not timely filed within the currently set shortened statutory period, Applicants respectfully petition for an appropriate extension of time.

The fees for such extension of time may be charged to our Deposit Account No. 02-4800.

In the event that any additional fees are due with this paper, please charge our Deposit Account No. 02-4800.

Respectfully submitted,

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